

What is claimed is:

1. An isolated polynucleotide selected from the group consisting of:
 - (a) a polynucleotide comprising the nucleotide sequence of SEQ ID NO: 1;
 - (b) a polynucleotide comprising the nucleotide sequence of a β -amyloid peptide-binding protein (BBP) of clone BBP1-fl deposited under accession number ATCC 98617;
 - (c) a polynucleotide encoding a β -amyloid peptide-binding protein (BBP) encoded by the cDNA insert of clone BBP1-fl deposited under accession number ATCC 98617;
 - (d) a polynucleotide comprising the nucleotide sequence of SEQ ID NO: 1 from nucleotide 202 to nucleotide 807;
 - (e) a polynucleotide comprising the nucleotide sequence of a β -amyloid peptide-binding protein (BBP) of clone pEK196 deposited under accession number ATCC 98399;
 - (f) a polynucleotide encoding a β -amyloid peptide-binding protein (BBP) encoded by the cDNA insert of clone pEK196 deposited under accession number ATCC 98399;
 - (g) a polynucleotide encoding a protein comprising the amino acid sequence of SEQ ID NO: 2;
 - (h) a polynucleotide encoding a protein comprising a fragment of the amino acid sequence of SEQ ID NO: 2 having human β -amyloid peptide binding activity, the fragment comprising the amino acid sequence from amino acid 68 to amino acid 269 of SEQ ID NO: 2;
 - (j) a polynucleotide which is an allelic variant of the polynucleotide of (a)-(f) above;
 - (k) a polynucleotide which encodes a species homologue of the protein of (g)-(h) above; and
 - (l) a polynucleotide capable of hybridizing under stringent

0990909-04-99

conditions to any one of the polynucleotides specified in (a)-(h).

2 The polynucleotide of claim 1 wherein said polynucleotide is operably linked to at least one expression control sequence.

3. A host cell transformed with the polynucleotide of claim 2.

4. The host cell of claim 3 wherein said cell is a prokaryotic or eukaryotic cell.

5. A process for producing a protein encoded by the polynucleotide of claim 2 which process comprises (a) growing a culture of the host cell of claim 3 in a suitable culture medium; and (b) purifying the protein from the culture medium.

6. A protein produced according to the process of claim 5.

7. A protein comprising an amino acid sequence selected from the group consisting of:

- (a) the amino acid sequence of SEQ ID NO: 2;
- (b) the amino acid sequence of SEQ ID NO: 2 from amino acid 68 to amino acid 269;
- (c) the amino acid sequence encoded by the cDNA insert of clone BBP1-fl deposited under accession number ATCC 98617; and
- (d) fragments of the amino acid sequence of SEQ ID NO: 2 comprising the amino acid sequence from amino acid 185 to amino acid 217 of SEQ ID NO: 2.

8. The protein of claim 7, wherein said protein comprises the amino acid sequence of SEQ ID NO: 2.

9. A fusion protein comprising a BBP1 linked to a heterologous protein or peptide sequence.

10. The fusion protein of claim 9 in the BBP1 has the amino acid sequence of SEQ ID NO: 2.

09060609-041599

11. An oligonucleotide which encodes an antisense sequence complementary to a portion of BBP1 sequence of SEQ ID NO: 1 and which inhibits expression the BBP1 gene.

12. A method for determining a polynucleotide encoding a β -amyloid peptide-binding protein (BBP) in a sample comprising the steps of (a) hybridizing to a sample a probe specific for said polynucleotide under conditions effective for said probe to hybridize specifically to said polynucleotide; and (b) determining the hybridization of said probe to polynucleotides in the sample, wherein said probe comprises a nucleic acid sequence having a region of 20 or more base pairs at least 90% identical to the polynucleotide sequence of SEQ ID NO: 1.

13. A method for determining a polynucleotide encoding a β -amyloid peptide-binding protein (BBP) in a sample comprising the steps of (a) hybridizing to a sample a probe specific for said polynucleotide under conditions effective for said probe to hybridize specifically to said polynucleotide; and (b) determining the hybridization of said probe to polynucleotides in the sample, wherein said probe comprises a nucleic acid sequence having a region of 20 or more base pairs at least 90% identical to the polynucleotide sequence of the cDNA insert of ATCC 98617 or ATCC 98399.

14. An antibody that binds specifically to a polypeptide comprising a region at least 90% identical in sequence to the amino acid sequence of SEQ ID NO: 2.

15. An antibody that binds specifically to a polypeptide comprising a region at least 90% identical in sequence to the amino acid sequence of the β -amyloid peptide binding protein encoded by the cDNA insert of ATCC 98617.

16. A method for detecting in a sample a polypeptide comprising a region at least 90% identical to the amino acid sequence of SEQ ID NO: 2, said method comprising (a) incubating with a sample a reagent that bind specifically to said polypeptide under conditions

BBP-1-10-60909060

effective for specific binding; and (b) determining the binding of said reagent to said polypeptide the sample.

17. A method for detecting in a sample a polypeptide comprising a region at least 90% identical in sequence to the amino acid sequence of the β -amyloid peptide binding protein encoded by the cDNA insert of ATCC 98617, said method comprising (a) incubating with a sample a reagent that bind specifically to said polypeptide under conditions effective for specific binding; and (b) determining the binding of said reagent to said polypeptide the sample.

18. A method for diagnosing a disease characterized by aberrant expression of human β -amyloid peptide (BAP), comprising (a) incubating a sample indicative of the aberrant expression of human β -amyloid peptide with a reagent comprising a polypeptide comprising a region at least 90% identical to the amino acid sequence of SEQ ID NO: 2 under conditions effective for specific binding of said reagent to said human β -amyloid peptide; and (b) determining the binding of said reagent to said peptide in the sample.

19. A method for diagnosing a disease characterized by aberrant expression of human β -amyloid peptide, comprising (a) incubating a sample indicative of the aberrant expression of human β -amyloid peptide with a reagent comprising a polypeptide comprising a region at least 90% identical to the amino acid sequence of the β -amyloid peptide binding protein encoded by the cDNA insert of ATCC 98617 under conditions effective for specific binding of said reagent to said human β -amyloid peptide; and (b) determining the binding of said reagent to said peptide in the sample.

20. A diagnostic process comprising analyzing for the presence of a polynucleotide of claim 1 in a sample derived from a host.

21, A method for identifying compounds which regulate the activity of a β -amyloid peptide binding protein comprising (a) incubating a sample comprising human β -amyloid peptide in a test medium containing

項目	単位	数値
総人口	人	1,234,567
男性人口	人	612,345
女性人口	人	622,222
人口密度	人/平方キロメートル	123.45
出生率	‰	10.5
死亡率	‰	8.2
自然増減率	‰	2.3
平均寿命	歳	75.6
識字率	%	98.7
労働力人口	人	567,890
失業率	%	5.4
所得総額	億円	1,234.56
一人当たり所得	円	1,234,567
消費税率	%	10.0
財政赤字	億円	123.45
国債発行額	億円	1,234.56
外債残高	億円	123.45
貿易収支	億円	123.45
対外依存度	%	15.6
環境指標	単位	123.45
社会福祉	単位	123.45
教育水準	単位	123.45
健康指標	単位	123.45
安全指標	単位	123.45
文化指標	単位	123.45
経済指標	単位	123.45
政治指標	単位	123.45
環境指標	単位	123.45
社会福祉	単位	123.45
教育水準	単位	123.45
健康指標	単位	123.45
安全指標	単位	123.45
文化指標	単位	123.45
経済指標	単位	123.45
政治指標	単位	123.45

said test compound and a reagent comprising a polypeptide comprising a region at least 90% identical to the amino acid sequence of SEQ ID NO: 2 under conditions effective for specific binding of said reagent to said human β -amyloid peptide; (b) comparing the binding of said reagent to said peptide in the sample in the presence and absence of said test compound; and (c) relating the difference between the binding in step (b) to the test compound regulating the activity of the β -amyloid peptide binding protein.

22. A method for identifying compounds which regulate the activity of a β -amyloid peptide binding protein comprising (a) incubating a sample comprising human β -amyloid peptide in a test medium containing said test compound and a reagent comprising a polypeptide comprising a region at least 90% identical to the amino acid sequence of the β -amyloid peptide binding protein encoded by the cDNA insert of ATCC 98617 under conditions effective for specific binding of said reagent to said human β -amyloid peptide; (b) comparing the binding of said reagent to said peptide in the sample in the presence and absence of said test compound; and (c) relating the difference between the binding in step (b) to the test compound regulating the activity of the β -amyloid peptide binding protein.

23. A method for the treatment of a patient having need to inhibit β -amyloid peptide accumulation in the brain comprising administering to the patient a therapeutically effective amount of the polypeptide of claim 7.

24. A transgenic or chimeric animal comprising the polynucleotide of claim 2.